

# THE ACORN

American River Natural History Association Members' Magazine  
Spring 2018



**Peregrine Falcon Training • Help Threatened Monarch Butterflies**



# from the president

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Happy New Year to you all. I have to admit that I continue to be a total optimist, no matter how many years I have lived. Each new year, I feel hope for good things to come and look forward to what adventures the next year shall bring. I do hope that this year will be one of good health, good times, and great adventures for us all.

By the time you read this, our new Executive Director Torey Byington will have begun her adventure with us. If you haven't done so already, please take a moment to visit the Nature Center and introduce yourself. A new leader brings a new perspective. Torey has a passion for nature education and experience to back it up. I look forward to working with her. There is no doubt in my mind that in the course of this year, the education opportunities and the experience of getting closer to nature that are already great will continue to grow and become even better.

With deep emotion and gratitude, we say goodbye (sort of) to Paul Tebbel and Betty Cooper as they retire from the Nature Center. I say "sort of" because they each will continue to be involved in this place that they love, just in different ways. We wish them a happy and fulfilling retirement.

Bird and Breakfast will be on March 17 for the adult event and March 24 for the family event with the pancake breakfast provided by Carmichael Kiwanis. This will be a good time to use your copy of ARNHA's new *150 Frequently Seen Birds of California's Great Valley*.

When you get your reminder to renew your membership, you will notice that some things have changed. After careful consideration, we agreed that membership levels should be simplified with names that reflect nature. Some of the benefits at the higher levels have been updated, but the basics remain the same. Membership still gets you free parking in the EYNC parking lot and a discount for purchases in the Discovery Store. I would like to encourage everyone to think about upgrading their membership if at all possible, or, better yet, consider making your membership donation a monthly recurring amount. I can't begin to tell you how important your membership is to ensuring that the Effie Yeaw Nature Center remains open and continues to shape the stewards of our natural world, young, old, and in-between.

All the best in 2018! See you by the River.



In all things of nature, there is something of the marvelous. – Aristotle



Photo by Kari Bauer

**Cover Photo:** I was fortunate to enjoy time outside with Naturalist, Heather and Wek'-Wek, our newly-arrived Peregrine Falcon. Wek'-Wek was quite calm and cooperative and will surely become an accomplished animal ambassador for the Effie Yeaw Nature Center.

**Camera:** Canon EOS 7D, ISO 400, 135 mm, f8, 1/200

**Photographer:** Kari Bauer

# Training Wek'-Wek

by Margaret Leavitt

Frequently, visitors to the Nature Center survey the resident animals in the lobby and ask, “Are they tame? Like pets?” The answer is a firm “No,” and a “Well, it’s a little more complicated.” They are wild animals, entitled to live in an environment as close to what they encounter in the wild as their physical limitations will allow. But, like domesticated animals, they depend on people for their well-being. And in turn, the EYNC animals have a job, going out to visit schools and other groups to educate people about nature. They go on outreach, they go to events, and they go to the vet for well-care and illness appointments. They tolerate our animal care handlers reaching into their enclosures to clean, offer food, and transport them. All these activities may require that the animals be handled. They live in close proximity to humans, and for some of the resident animals, particularly the raptors, the safety of the animals and their caregivers requires both to undergo some training. The foundation of training is trust, the development of a bond between the animal and its handler.

Recently, EYNC staff have had the opportunity to work with a new resident raptor – Wek'-Wek, a two-year-old female Peregrine Falcon (*Falco peregrinus*). A Peregrine Falcon is a magnificent animal, entitled to a number of superlatives: the largest, with a limited exception, falcon in North America (the Gyrfalcon is larger but is uncommon even in its range of Canada and the northern United States); the fastest animal in the world; and, one of the most compelling comeback stories in the history of the environmental movement. Training a creature like Wek'-Wek is a great responsibility and a daunting undertaking.

Peregrine Falcons are found on every continent in the world, except Antarctica. In North America, year-round populations are concentrated along the west coast. Some populations breed in the Arctic tundra and migrate annually to southern South America. Historically, Peregrine Falcons have preferred open habitat: fields, rangeland, tundra, and coast, but they are increasingly adapted to urban settings, where ledges on tall buildings mimic their preferred cliffside nesting sites, and pigeons are an abundant food source.

In the mid-1900s, Peregrine Falcons fell victim to the use of pesticides such as DDT, which worked its way up the food chain to dramatically weaken the shells of the falcons’ (and other birds’) eggs, severely challenging the chance for the species’ reproduction. The Peregrine Falcon population was virtually eliminated. Pesticide bans and captive breeding programs proved successful, and the reestablishment of the species in the wild has been one of the remarkable accomplishments of the conservation movement.

Peregrine Falcons are about 14 to 22 inches long, with a wing span of about three-and-a-half feet. As with other



*Heather Gabel trains Wek'-Wek to accept human touch, a skill important for wellness exams and care of talons and beak.*

Photo by Kari Bauer

raptors, they are sexually dimorphic – the females are typically about thirty percent bigger than the males. In captivity, their life expectancy is 25 years; in the wild it is five to fifteen years, with only about twenty percent of fledglings surviving their first year.

When Wek'-Wek was less than a year old, she was shot in both wings under circumstances that remain unknown. She was found on railroad tracks near Portola in the Sierra Nevada, frightened and badly injured, and was taken to Lake Tahoe Wildlife Care, Inc. Ultimately, it was determined that she would never be able to fly and to survive in the wild. The EYNC was able to demonstrate that it could provide

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Wek'-Wek with appropriate housing and care, and obtained a license under the Federal Migratory Bird Act to acquire her. Because Wek'-Wek cannot fly to the perch in her mew, a special ramp was installed to enable her to walk up to her perch, which was also enlarged to accommodate her large feet.

Despite not being able to fly, Wek'-Wek still demonstrates the characteristics that make her species the fastest on earth. Not surprisingly, aeronautical engineers have studied the peregrine falcon to better understand and implement flight principles. Falcons' bodies are sleek, their feathers stiff, and their wings pointed and angular. Bony cones—tubercles—inside the nasal gland regulate air pressure to protect the lungs during steep dives; nictating membranes create an extra eyelid to protect the eyes while maintaining vision. Malar stripes, common to most falcons as well as another speedy hunter, the Cheetah, (and similar to the black stripes that football players draw under their eyes) line the sides of the face to absorb glare, enabling the predator to spot prey even in strong light.

Circling at a height of 300 to 3,000 feet above the earth, a Peregrine Falcon will spot prey flying below, and in a steep, swooping dive or “stoop,” the bird plummets toward earth at speeds of over 200 mph. Then, at the last second, the Falcon flips up, striking the prey with a blow from its feet that stuns the prey or kills it. The Falcon then catches the prey and, using its tomial tooth—interlocking notches in the beak—bites the neck to break it. (You can find footage of the stoop and the strike on the internet.)

The diet of the Peregrine Falcon is almost exclusively medium-sized birds, although Peregrine prey can vary from hummingbirds to Sandhill Cranes. A typical food is the duck, hence the common name for the Peregrine Falcon: “duck hawk.” When Wek'-Wek arrived at EYNC, staff gave her the name “Wek'-Wek” which means duck

hawk in Maidu.

Wek'-Wek's exposure to people began when she was found on the railroad tracks and rescued. (Actually, she was handled by humans before that, when she was banded in the nest; details about her banding have not yet been provided by the U. S. Fish and Wildlife Service.) Once her injuries were diagnosed and treated, she was cared for in a rehabber's home.

When Wek'-Wek arrived at EYNC

ing handled. JoLynn Jarrett and Jackie DeWeese from EYNC animal care staff also worked with Wek'-Wek, helping ensure that she would be comfortable being handled by different people.

Training a Peregrine Falcon is not without precedent. For several thousand years, Peregrine Falcons have been prized for their use in falconry. They are excellent hunters and highly trainable. More recently, the species has been available for falconry through captive



Photo by Kari Bauer

*Wek'-Wek receives a reward for allowing her handler to touch her beak.*

in early June of 2017, she was very nervous after months of medical treatment. Other than handling for medical purposes, she had had little direct interaction with people. She trembled at the sight of new handlers. EYNC trained animal care staff work closely with our birds when they arrive. Initial training is intense and is most effective with just one primary trainer. In this case EYNC Naturalist Heather Gabel, who had trained macaque monkeys at the Folsom Zoo, took on the primary responsibility for getting Wek'-Wek accustomed to her new home and to be-

breeding programs.

Heather used a training method known as Operant Conditioning that rewards desired behavior but does not punish the animal when it doesn't follow a request. Because food is used as a reward during training, the first task was to persuade Wek'-Wek to take food from Heather's hand. Heather approached this step very slowly, putting the food near Wek'-Wek, then holding it up to her beak. Wek'-Wek was definitely interested – at first she would bite at the food, but not take it, then, as she gained

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trust in Heather, she began to take the food from Heather's hand. Heather spent very short periods with Wek'-Wek at first, careful to not stress her, and kept records of each encounter noting "negative progress," "needs work" or "positive progress." As Wek'-Wek progressed, Heather employed a "bridge," in this case the spoken word "good", to establish a link between the desired behavior and the food reward. A big advantage, she says, is that Wek'-Wek is very food motivated, something that is not true of all the EYNC raptors.

Once Wek'-Wek was comfortable taking food from Heather, she needed to learn to step onto the glove, a thick leather covering that protects handlers' hands and arms from the strong talons a raptor uses to tear apart its prey. Heather placed the glove on the perch to get Wek'-Wek accustomed to it, eventually offering food on the other side of the perch so that Wek'-Wek had to step onto the glove to reach the food.

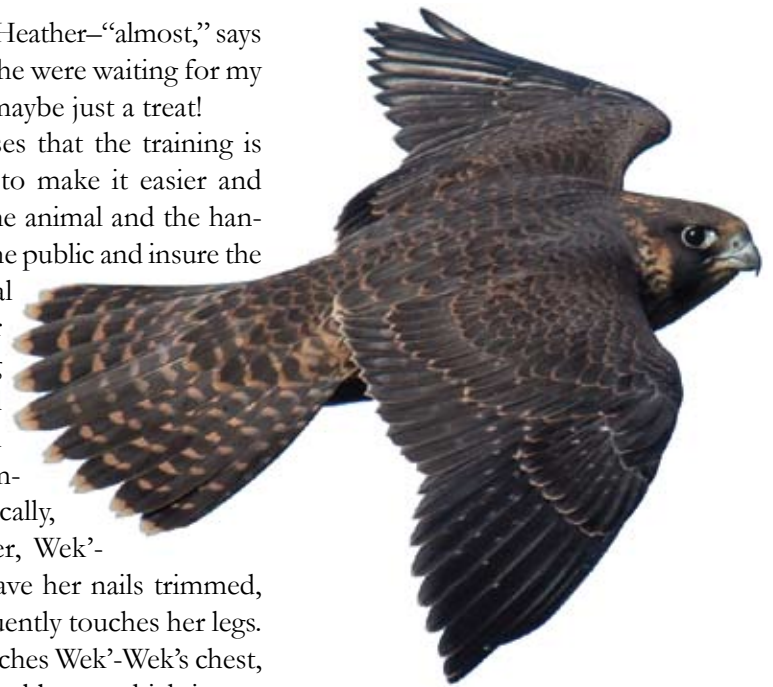
Wek'-Wek was tentative at first – one foot, then two feet, and finally, she began to stand on the glove. Then Heather began to move her own hand into the glove, at first keeping it still, and then moving it. Heather proceeded very slowly, working in short time periods over several months. Finally, in August, Wek'-Wek stepped up onto the glove that Heather had on her hand, and Heather moved her from the perch to Heather's side. Wek'-Wek was ready to be introduced to the world.

Again, Heather took things very slowly. As she worked from holding Wek'-Wek on the glove near her mew door, to the back porch, to the staff room, and finally to outreach, Wek'-Wek's nature began to emerge. Heather describes her as curious about everything and very aware of her surroundings. When Wek'-Wek goes out to classes, she can be nervous, but she remains outwardly calm. She's an engaging raptor, says Heather, because she reacts to people, exhibiting preferences for some, and responding to events in her environment. While on the glove, Wek'-Wek seems

very attentive to Heather—"almost," says Heather, "as if she were waiting for my command"—or maybe just a treat!

Heather stresses that the training is designed solely to make it easier and safer for both the animal and the handler to educate the public and insure the animal's physical wellness. For example, getting Wek'-Wek used to being touched –not petted—is important. Periodically, explains Heather, Wek'-Wek needs to have her nails trimmed, so Heather frequently touches her legs. Heather also touches Wek'-Wek's chest, feeling for the keel bone, which is one indicator of a bird's general health.

Although Wek'-Wek has made great progress, her training is ongoing, reinforcing what she has learned. "They [resident animals] are missing so much of the stimulation in the wild, that it is important to keep their minds active," says Heather. Training is one way to provide for the active mind. Heather sums up her experience with Wek'-Wek this way: "They say the trainer comes up with half the plan, and the bird comes up with the other half." The trainer has to consider what the animal likes, what it responds to, and what it can do physically, and to look for clues



from the animal that communicate that. And with that interaction comes trust, and then a bond. No, they are not pets. They are wild animals – and so much more.

*Margaret Leavitt is a docent, volunteer receptionist at Effie Yeaw Nature Center, and a member of ARNHA's Media/Publication Committee.*

Photo of a Peregrine Falcon in flight, by Stephen Fischer, is featured in ARNHA's new field guide, *150 Frequently Seen Birds of California's Great Valley*. See back page for more details. ■

**Bird and Breakfast  
Annual Birding Events  
at Effie Yeaw Nature Center**

*Two delightful mornings of birding with Sacramento Audubon  
and a hot breakfast afterward*

**Traditional Event ~ Saturday, March 17 at 8am**  
Tickets: \$40 per adult, \$35 for members

**Family Event ~ Saturday, March 24 at 8am**  
Tickets: \$10 per adult, \$5 per child (discounts for members)

**Registration now open!**  
Purchase tickets at [www.SacNatureCenter.net](http://www.SacNatureCenter.net) or by calling (916) 489-4918

# Threatened Monarch Butterflies Need Your Help

by Krystin Dozier

The Monarch Butterfly is well known for its long-distance seasonal migration and its spectacular winter gatherings. West of the Rockies, Monarchs migrate to the California coast. Most of California's Monarchs cluster in groves of nonnative Blue Gum Eucalyptus, as well as Monterey Pine, Monterey Cypress, and Redwood.

Each spring, monarchs disperse across California, searching for milkweed plants on which to lay their eggs.

and metamorphose into beautiful butterflies, which lay eggs and restart the cycle that will be repeated many times throughout the summer. I hadn't seen caterpillars since I was a young girl, so I was thrilled to reconnect with the mystical beauty of nature once again.

The planting of milkweed at EYNC created a field of dreams for the returning butterflies, offering the only species of plant that Monarchs use for laying their eggs. We have both the Showy

knowledge to inform and inspire Monarch conservation efforts.

EYNC has become a monitoring site for this project over the last two years. We are looking for new recruits to help us continue this study in our area throughout the seasonal visits of Monarchs to our Center. Monarchs lay their eggs on milkweed whose leaves are food for the larvae. The Butterflies feed on nectar from a variety of flowering plants which they help pollinate.



Photo by Kari Bauer

*Over a span of seventeen minutes, this Monarch Butterfly emerged from its cocoon and unfurled its wings, ready for flight.*

Milkweed is the only plant Monarch caterpillars can eat to grow and develop into adults. Several generations are produced throughout the spring, summer, and fall, with each generation spreading further across the landscape.

The last generation then migrates all the way back to the overwintering grounds in the fall. Remarkably, Monarchs return to the same groves of trees as their ancestors. Studies of the overwintering sites over the past 20 years demonstrate that monarchs have undergone a dramatic 95% decline in the western U.S. since the 1980s (Schultz et al. 2017).

When I first became a docent at Effie Yeaw Nature Center (EYNC), I was fascinated to see Monarch Butterfly caterpillars grow, develop their chrysalises,

Milkweed and Narrow Leaf Milkweed at EYNC. Which do you guess our visiting Monarch Butterflies prefer? Are you, also, fascinated by butterflies, their life-cycle metamorphosis, and annual migration patterns? Do you want to help this threatened species to survive? Your local observations and participation as a citizen scientist can help.

The Monarch Larvae Monitoring Project (MLMP) is an international research project across the US, Canada, and Mexico, led by researchers at the University of Minnesota, and engaging citizen scientists from local communities to contribute their observations. The MLMP mission is to achieve a better understanding of the distribution and abundance of breeding Monarchs, what threatens them, and to use that

The emerging butterflies start the cycle again.

We have an abundance of milkweed plants at EYNC, with 85 plants included in the study last year! The study includes weekly monitoring of the milkweed plants, looking for eggs, then larvae, and finally tracking the chrysalises through to emergence of the new butterfly.

We need recruits to sign up for at least 4 weekly monitoring sessions of 1-2 hours each (8 hours minimum), throughout the May to October season to capture data spanning the time from the arrival to the departure of the Monarchs. Students in the UC California Naturalist class can use this to meet their capstone project requirements. Planting native milkweed in your garden

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also helps the Monarchs to thrive.

“The opportunity to contribute to EYNC’s mission to educate the public about nature, while participating in a national research project to protect this threatened species, and just seeing so many caterpillars and chrysalises myself was a joy!” stated Joe Soots, EYNC volunteer and Naturalist class participant.

A training session, with review of observations and data entry guidelines, will be held in April. Signups for monitoring sessions will be available for May through October. If you might be interested, please contact Krystin Dozier at [kdrn4u@comcast.net](mailto:kdrn4u@comcast.net) for additional information, or visit her at EYNC on Wednesday afternoons.

*Krystin Dozier is a retired nurse who took up studying nature and art in her retirement. She started the MLMP project at EYNC as her capstone project for her California Naturalist certification in 2016. She currently volunteers at EYNC on Wednesday afternoons, in between travel trips and painting classes. Reconnecting with nature at EYNC has brought her great joy. ■*

**Torey Byington begins her duties as Executive Director of the Effie Yeaw Nature Center on February 1, 2018. We heartily welcome her.**



## The Big Day of Giving is May 3

Sacramento’s 24-hour Non-Profit Fundraiser

With education and opportunities to connect with nature, people learn to appreciate and protect natural spaces which are critically important for individual well-being and the health of our communities. On this important day we hope you’ll stand with ARNHA and the Effie Yeaw Nature Center in our commitment to educating our region and providing connections with nature!

Make your donation on May 3, 2018  
at [www.bigdayofgiving.org/effieyeaw](http://www.bigdayofgiving.org/effieyeaw)

Thank you for your continued support!

## Annual Wildlife Count Send Data to Scientists Around the World

*by Rachael Cowan*

The 33rd Annual ARNHA Wildlife Count was held on Saturday, December 2, 2017. Twelve teams, 68 participants total, including one team in a canoe, set out to various locations along the American River Parkway, from Hazel Avenue to the mouth of the Sacramento River. Volunteers observed 119 bird species for a total count of 14,326 birds, an increase from the 2016 Count. Overall, the results were fairly typical.

A number of teams saw Blue-gray Gnatcatchers, but no one spotted any Northern Harriers, Osprey, Varied Thrush, or Bald Eagles. Canada Geese are continuing their rise in population along the river. European Starling numbers are also going up. Five teams saw Coyotes, including one team who saw a Coyote catch a Canada Goose! Five teams each saw River Otters, and four teams each saw a sea lion.

This year’s effort to cover the Discovery Park area was carried out by the Sacramento Valley Conservancy’s Camp Pollack team. This was a natural fit with their knowledge of the area and relationship with local landowners. Thanks to Evan Griffiths, Tim Fiock, and other members of the Meadowlarks team, all twelve historical teams participated. Count results are submitted by team leaders via eBird so that data is available to citizens and scientists around the world. The data is also used by the staff at Effie Yeaw Nature Center and ARNHA to follow the population trends of various species in the American River Parkway. Citizen Science efforts such as this assist us in tracking the potential effects of droughts and climate change on bird populations.

You can see all the checklists and some team photos on the Nature Blog on our website at [SacNatureCenter.net](http://SacNatureCenter.net)

*Rachael Cowan is an Education Coordinator at Effie Yeaw Nature Center and a certified UC Naturalist. From Grass Valley, she has a lifelong passion for the natural world and science education. ■*



# Under the Oaks

*by Pete the Parkway Coyote*

The rutting season has ended, and does have settled down to the task of “eating for two,” munching on the bright green grasses typical of our California winters. Red-shouldered Hawks scream as they defend their territories and carry nesting materials to this year’s nest sites. The pair behind the Nature Center appear to be working on the same nest they have used in the past.



Photos by Kari Bauer



April 15 is the deadline for Art Where Wild Things Are, a juried show of works to be auctioned at the Art Gala June 9. Art should reflect broad and creative interpretations of life in our LOCAL NATURAL world. Abstracts and sculpture are welcome. More information at [sacfinearts.org](http://sacfinearts.org).

The annual sale of used nature books will be held March 3; your book donations may be dropped off at the Nature Center any time before then. This is a popular event, with most books selling for only \$1 to \$5.

Spring Nature Camps, the last week in March, are filling up fast. A variety of themes will include Happy Hikers, Creepy Crawlies, and more for ages 6-8 and 8-11; Camp 5 is designed just for 5 year olds. See our website for more information and to sign up: [www.SacNatureCenter.net](http://www.SacNatureCenter.net).





Through the Urban Nature Project, over 4,000 youth will be introduced to nature either at Effie Yeaw Nature Center or in their classrooms. With 168 programs booked, only a few openings remain.



Despite long lines and crowded conditions, the December 2 Holiday Sale was a huge success with sales up over 30%. The Sale Committee began meeting immediately after the shop closed and plans are in place for more comfortable shopping next year, including a second cash register.

Mark your calendar for the 2018 Art Where Wild Things Are Art Gala, Saturday, June 9, 5 pm to 8 pm, at Effie Yeaw Nature Center



Three adult programs fill the Nature of Things Series for spring: Owling in the Sierra Foothills with Rudy Darling, Beginning Birding with Rich Howard, and a Photography Workshop with Stephen Fischer. See [SacNatureCenter.net](http://SacNatureCenter.net) for details.

In early February, current volunteers enjoyed fine food and camaraderie at the Volunteer Recognition Luncheon, where the staff outdid themselves with homemade soups and salads. Twenty volunteers were honored. Those who donated 500 hours or more to Effie Yeaw Nature Center nature education programs included Jan Ahders in landscaping, Michele Beckwith and George Wagner in animal care, Sandie Dunn and Dick Laursen on the ARNHA Board, and Melissa Shumate as docent.

Volunteer opportunities include Animal Care Assistant, Docent, Receptionist, Trail Walker and more. To volunteer, contact the Volunteer Coordinator, Jamie Washington, by email at [JamieW@SacNatureCenter.net](mailto:JamieW@SacNatureCenter.net).

I hope to see you at the Nature Center soon.

*Pete's curious nature, sharp eyes, and keen sense of smell make him a great ambassador for the American River Natural History Association.*



# New Members Oct-Dec

- Jen Adkins
- Carolina Alvayay & Neel Kumar
- Cheri Anderson
- Rebecca Anderson
- Pete Andrew
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- Karen Armstrong
- Laurel Astorino
- Sara W. Baldwin
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- Mike Cruikshank
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- Gretchen Dariotis
- Natasha Delgado
- Sarah Dequine
- Kimberly Dillon
- Don Dittmer
- Rod Dubie & Teri & Brandie Epp
- Mychi Eggleston
- Veronica Encinas
- Becky Erickson
- Kathy Fair
- Valencia Faux
- Connie Ferrara
- Patrick Ferris
- Mary Louise Flint
- Diwata Fonte
- Margaret Gabil
- Shaylah Garcia-Tapia
- Barbara Gardner
- Peter Gasca
- Anna Gleghorn
- Erica Goffinet
- Shannon Gordon
- Richard Gould
- Aaron Gravvat
- Luke & Kailey Hackbarth
- Nissa Hallquist & Becky Barnhart
- Laura Ham
- Brent & Joan Hammond
- Ruth Hammontree
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- Kristine Harrisberger
- Jill Henle-Rall
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- Ellen Hughes
- Roland Hyatt & Sis Hendrix
- Madeleine Jensen
- Yascara Jimenez Chavez
- Brent Johnson
- Suja Joseph
- Kim Kauffman
- Sara Kinaci
- Sharon Kindel
- Knights Family
- Irma Larin
- Lisa Lee
- Norm Leyte
- Sharyn Lieth
- Natalia Lyubimova
- Olivia O'Bryon Mackey
- Linda Marks & Earl Blauner
- Stewart & Jeanie McCartney
- Jim & Hillary McCurley
- Mike & Merrie McLaughlin
- Kristi Michels
- Linda Moniz
- Derek Moore
- Manuel Morales
- Kersten Morris-Delvis
- Eli Muallem
- Rosanne Mullen
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- David Yager

## Photographer's Corner

Photographer: Hayley Crews

Description: Listen for the high-pitched call of the Brown Creeper, *Certhia Americana*, to find this hard-to-spot small tree-crawler. Camera settings: Nikon D500, Nikkor 200-500, 1/250 s, f5.6, ISO 320.



# Spring Awakens Clem, the Western Pond Turtle

by JoLynn Jarrett

Springtime along the American River brings life into our nature preserve. Spring is also the time when Western Pond Turtles, also known as Pacific Pond Turtles, *Actinemys marmorata*, begin to dig their way out of their beds of mud and vegetation. Many turtles line up along rocks and logs to bask in the warm spring sun. However, you have to have a quick eye, for they will often dive into the water with the sound of a ploop before you even notice that they were there.

All turtles are mostly aquatic, often seen stretching their



Photo by Heather Gabel

long necks out of their shells to stick their noses out of the water to breathe. They have webbing between their toes to help them swim and have long claws to help them dig in the mud and climb up on rocks and logs. Turtles are omnivorous, meaning they feed on both meat and vegetation. Most of their plant diet consists of algae, lily pads, and roots of Common Tule and Broad-leaved Cattail. For meat, they will eat insects, crayfish, aquatic invertebrates, and sometimes small fish and tadpoles.

In October of 2007, Sacramento County Animal Control (SCAC) received a turtle. SCAC planned to release the turtle the next day. However, during the night, the turtle laid seven eggs. The turtle was released, and the eggs were delivered to the Effie Yeaw Nature Center.

The county employees thought the mother was a Western Pond Turtle, but the EYNC staff thought that unlikely. In addition, turtle eggs have a high mortality rate if they are disturbed. Nevertheless, the staff decided to try incubating

the eggs, and five of the seven hatched! They were indeed Western Pond Turtles! The baby turtles that came out were no bigger than a nickel. Clem stayed with the staff of Effie Yeaw while the other four baby turtles were donated to UC Davis.

Clem will come out of brumation, the reptile version of hibernation, sometime around March. He, then, will swim around in his enclosure in the lobby.

Female Western Pacific Pond Turtles generally lay about five to eleven eggs per clutch, and they generally lay only one or two clutches a year. They often travel up to 300 feet from the water to lay their eggs and then return to the water, leaving the eggs buried in sand facing south to receive the full benefit from the sun. When they hatch, the baby turtles' shells are still soft, making them very vulnerable. Their shells harden as they grow older and eat the right food.

Although Western Pond Turtles have hard shells, they are prey for Raccoons, River Otters, Ospreys, and Coyotes.

However, their biggest threat is habitat loss and the introduction of non-native species that are released into the wild. Much of the seasonal ponds and marsh area preferred by these Western Pond Turtles has been filled

and developed or farmed.

The non-native Red-eared Pond Slider, a common pet turtle, has been observed in increasing numbers along the American River. Females can lay many clutches of eggs per year and often have up to forty eggs per clutch. With such huge numbers, they quickly outpopulate the Western Pond Turtle and outcompete for food and nesting locations.

Western Pond Turtles can be found from the Olympic Peninsula in the State of Washington and parts of Canada all the way south to Northern Mexico. Their habitat mostly includes slow moving rivers, ponds, and marshy areas.

Fun Fact: Turtles cannot crawl out of their shells. In fact, their shells are a part of their backbone. They can, however, tuck themselves completely inside their shell, including their legs, heads and tails.

*JoLynn Jarrett is part of the EYNC Animal Care Staff. She grew up on a ranch and has loved animals for as long as she can remember. ■*

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## Ask a Naturalist

**Q.** How can woodpeckers peck at trees as hard as they do without giving themselves a hefty concussion?

**A.** Naturalist Cecilia Whitworth replies: “Reason #1: Woodpeckers’ brains are positioned differently in their skulls. Imagine your brain as half of a ball. Ours are positioned with the flat part down, while a woodpecker’s is positioned with the flat part facing the front of its head. This means that the part of the brain impacting the inside of the skull has more surface area, which decreases the force of impact.

“Reason #2: Woodpeckers’ brains are smaller than ours. Less mass means less momentum and a smaller force of impact!

“Reason #3: Woodpeckers only impact for a very short amount of time. It turns out that the faster you can pull back from hitting something, the less impact you feel. A woodpecker’s peck only takes ½ - 1 millisecond! That’s just one one-thousandth of a second!

“It’s pretty amazing what a difference these traits make. Woodpeckers have been recorded pecking with impact speeds of 15mph, and forces 1500 times the force of gravity! Compare that to humans, who can only stand up to 100 times the force of gravity before brain injury. Better leave the pecking to the professionals!”

Source: “Built to Peck: How Woodpeckers Avoid Brain Injury.” Video series. MITx Media. 02/16/2016.

*Cecilia has been working in environmental conservation and education since 2012, with the California Conservation Corps and National Park Service. She is currently studying Natural Resources at American River College and is a part-time naturalist at EYNC. She grew up playing, hiking, and exploring in the outdoors and wants to share her love of nature with others. ■*

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## ARNHA Calendar of Events

### Sale of Used Nature Books

Saturday, March 3 - 9 a.m. to 3 p.m., EYNC

### Beginning Birding, Spring Edition w/ Rich Howard

Tuesdays, March 13, 20, 27, April 3; 6:30 p.m. to 8 p.m.

Sun., March 25 and Sat., April 7; 8 a.m. to 11 a.m.

### Bird and Breakfast

Saturday March 17, 8 a.m. to 11 a.m., EYNC

### Family Bird and Breakfast

Saturday, March 24, 8 a.m. to 11 a.m., EYNC

### Spring Nature Camps

March 27, 28, 29, EYNC

### Photography with Stephen Fischer

March 29 and 31, EYNC

### Art Where Wild Things Are

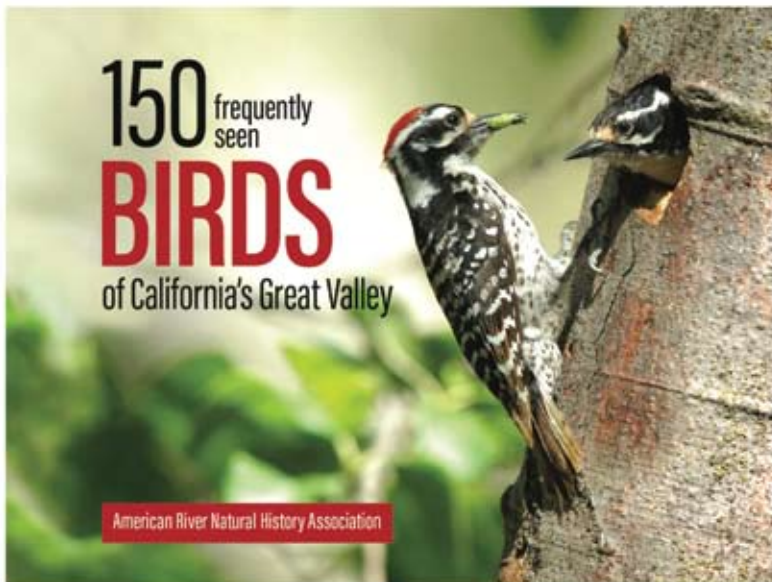
Call to Artists, April 15; Entry Deadline - midnight

See Sacramento Fine Arts Center.org

### Art Gala

Saturday, June 9, 5 p.m. to 8 p.m., EYNC

See [SacNatureCenter.net](http://SacNatureCenter.net) for more information.



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